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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Janne Jokinen

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EXAMINER

STANLEY, JANE L

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

05/13/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/533,880	Applicant(s) JOKINEN, JANNE	
	Examiner JANE L. STANLEY	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's request for continued examination **filed 6 March 2009** is acknowledged. As per the amendments to the claims filed on **6 February 2009**, **claims 1-6 and 10-11** are pending; **claims 1-2 and 4-6** are amended, **claims 7-9** have been cancelled, **claim 3** is as previously presented and **claims 10-11** are new.

Specification

Applicant's amendment filed **2 February 2009** to the specification regarding the deletion of the graphs on pages 21 and 23 and submission of Figures 1 and 2 is acknowledged. The previously set forth objection to the specification is withdrawn.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-2, 5-6 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ilves et al. (WO 97/31988) *as evidenced by* Masuda et al. (US 1,901,111).

Regarding claims 1-2 and 10-11, Ilves et al. teaches use of an aqueous solution (abstract) comprising trimethyl glycine or derivatives thereof and water (abstract; pg 3 ln 19-22) as a coolant fluid and/or as a protective fluid (heat transfer/cooling fluid, abstract; pg 3 ln 15-17) and further teaches that the fluids can

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comprise conventional corrosion inhibitors, stabilizing agents and marking agents (instant additives). Ilves et al. further teaches the derivatives of trimethyl glycine to include salts of trimethyl glycine hydrate (page 3 ln 24-25). Ilves et al. teaches that the aqueous trimethyl glycine solutions can be used in engine applications (motor applications, pg 1 ln 10-11).

While Ilves et al. does not specifically teach the method of introducing the coolant into the cooling system, Ilves et al. does teach the use of the coolant in motor applications and as the method step of instant claim 1 amounts to nothing more than the addition of the cooling liquid to the engine, the instantly claimed step is inherent.

Ilves et al. does not specifically teach the conventional corrosion inhibitors etc. to be present from 2-6 wt%. However, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicant's claims patentable in the absence of unexpected results. See *In re Aller*, 105 USPQ 233 and MPEP 2144.05. At the time of the invention a person having ordinary skill in the art would have found it obvious to optimize the amount of additives and would have been motivated to do so to obtain corrosion inhibition and/or stabilization in the coolant composition as use of such corrosion inhibitors, stabilizing agents and marking agents in coolant compositions is known in the art (Ilves et al., page 4 ln 6-8). A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. See *In re Boesch* and *Slaney*, 205 USPQ 215.

Ilves et al. teaches the aqueous solutions of trimethyl glycine or derivatives thereof can be used in motor applications. *Evidentiary reference* Masuda further supports the teaching of Ilves et al. by teaching that betaine and water antifreeze/coolant compositions are known in the art to be used in automobile radiators (Masuda col 1 ln 1-36) and furthermore, that such solutions exhibit valuable properties such as: a higher boiling point than water; no loss by evaporation; does not decompose upon standing or when subject to varying temperatures; relatively high in surface tension and low in capillary force; and has no corrosive action on metal surfaces (Masuda et al. col 2 lns 64-74).

Regarding claims 5-6, Ilves et al. makes obvious the method as set forth above and further teaches the aqueous antifreeze/coolant comprises from 15 to 70 wt% trimethyl glycine or derivatives thereof (makes obvious the instant 1 to 60 wt% and 20 to 45 wt% trimethyl glycine).

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ilves et al. (WO 97/31988) *as evidenced by* Masuda et al. (US 1,901,111) as set forth in **claim 1** above and in view of Oppenländer (DE 19830819, see English language equivalent: US No. 6,413,445).

Regarding claims 3-4, Ilves et al. makes obvious the method as set forth in **claim 1** above.

Ilves et al. does not specifically teach the motor applications to include internal combustion engines used in automobiles or engines have a water pump with aluminum

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components. However, Oppenländer et al. teaches coolants for use in internal combustion engines (col 1 ln 12-13), and also teaches that there is an increasing amount of aluminum used in internal combustion engines for the purpose of, in particular, weight reduction (col 1 ln 27-29). Ilves et al. and Oppenländer et al. are concerned with the same field of endeavor, namely antifreeze/coolant compositions used in motor applications. At the time of the invention a person having ordinary skill in the art would have found it obvious to use the antifreeze/coolant solutions of water and trimethyl glycine or derivatives thereof as taught by Ilves et al. in the internal combustion engines with increasing aluminum content of Oppenländer et al. and would have been motivated to do so to use an antifreeze/coolant composition that: has the same physical properties as those of glycol solutions, has the advantage of non-toxicity (Ilves et al. page 3 ln 30-32), is suitable for use at a temperature range of -50 to +100 °C (Ilves et al., page 3 ln 32 to page 4 ln 1), is more environmentally-friendly than known cooling fluids, is not classified as a problem waste and whose easy destruction decreases costs (Ilves et al., page 4 ln 10-16). To do so would amount to nothing more than use of a known composition for its intended use in a known environment to accomplish entirely unexpected results.

Response to Arguments

As indicated above, the objection to the specification regarding graphs/drawings needing to be separate from the body of the specification is withdrawn as a result of Applicant's amendments to the specification and submission of Figures 1 and 2.

The objections to **claims 2 and 4** for informalities are withdrawn as a result of Applicant's amendments filed **6 February 2009**.

The 35 U.S.C. 112, second paragraph rejections of **claims 1-6 and 8-9** are withdrawn as a result of Applicant's amendment to **claim 1** as filed **6 February 2009**.

The 35 U.S.C. 102(b) rejection of **claims 1-3, 5-6 and 8-9** as anticipated by Masuda et al. (US 1,901,111) **as evidenced by** Ilves et al. (WO 97/31988) is withdrawn as a result of Applicant's amendments to **claim 1**. Applicant's arguments filed **6 February 2009** are moot in view of the new grounds of rejection.

However, the Examiner would like to note, regarding Applicant's arguments directed toward the 102(b) rejection, that Ilves et al. was used as an **evidentiary** reference only, to demonstrate that the "betaine" of Masuada et al. is known to be trimethyl glycine (Ilves et al. page 3 ln 25-26).

The 35 U.S.C. 103(a) rejection of **claim 4** as unpatentable over Masuda et al. **as evidenced by** Ilves et al. and in view of Oppenländer (DE 19830819, using US 6,413,445 as English language equivalent) is withdrawn as a result of Applicant's

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amendments to **claim 1**. Applicant's arguments filed **6 February 2009** are moot in view of the new grounds of rejection.

However, the Examiner would again like to note, regarding Applicant's arguments directed toward the 103(a) rejection, that Ilves et al was used as an **evidentiary** reference to demonstrate that the "betaine" of Masuada et al. is known to be trimethyl glycine (Ilves et al. page 3 ln 25-26).

Furthermore, regarding Applicant's "Exhibit A", it is unclear why Applicant is arguing that the compatibility of ethylene glycol with elastomeric materials at temperatures above 80 °C results in it being "surprising that an aqueous solution containing trimethyl glycine can be used in very demanding engine applications, such as combustive engines without any problems" (Applicant's arguments page 6). The compatibility of ethylene glycol with elastomeric materials does not appear to have any bearing on the use of aqueous solutions of trimethyl glycine in an engine with or without any "problems". If Applicant is attempting to demonstrate that the instant invention is in some way unexpected, a comparison of the instant invention with the closest prior art would be required.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JANE L. STANLEY whose telephone number is (571)270-3870. The examiner can normally be reached on Monday-Thursday, 7:30 am - 5 pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/JLS/